

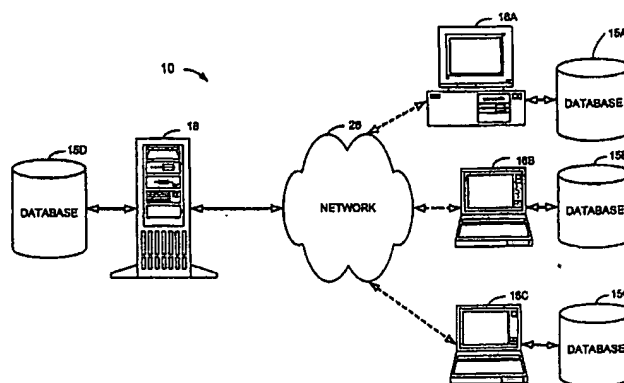
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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/US99/21661</p> <p>(22) International Filing Date: 17 September 1999 (17.09.99)</p> <p>(30) Priority Data: 09/156,075 17 September 1998 (17.09.98) US</p> <p>(71) Applicant: SYNCHROLOGIC, INC. [US/US]; 250 14th Street, Fourth floor, Atlanta, GA 30318 (US).</p> <p>(72) Inventors: MAHAJAN, Sameer, S.; 2465 NW Schmidt Way #320, Beaverton, OR 97006 (US). MALIK, Sanjoy; 2604 Forrest Way, Atlanta, GA 30305 (US). DONAHOO, Michael, J.; 3010 Treeterrace Parkway, Austell, GA 30168 (US). NAVATHE, Shamkant, B.; 10120 Twingate Drive, Alpharetta, GA 30022 (US). AMMAR, Mostafa, H.; 3050 Wembley Forest Court, Doraville, GA 30340 (US). MC-GEOUGH, Frank, H.; 5437 Oxford Chaseway, Dunwoody, GA 30338 (US).</p> <p>(74) Agent: STACHLER, Robert, E.; Thomas, Kayden, Horst-meyer &amp; Risley LLP, 100 Galleria Parkway, Suite 1500, Atlanta, GA 30339 (US).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i></p>

(54) Title: DATABASE SYNCHRONIZATION AND ORGANIZATION SYSTEM AND METHOD



## (57) Abstract

The present invention provides a "data centric" approach to updating databases on computer systems (516) of an intermittently connected database (15d) system. In this approach, the storage and processing complexity of the database server are decoupled from the number of clients to be supported, thereby, improving the scalability of the server. Instead of focusing on the data required by individual clients, this method tracks changes to data subsets pertaining to groups of clients. Thus, the server need only track and record changes to these subsets of data, instead of tracking changes for individual clients. Clients download the subsets, which contain the data relevant to the group, and merges data or deletes superfluous data from the subsets. Since the server is tracking a limited set of data subsets related to groups of clients instead of the actual number of the clients, the overall scalability of the system is increased. In this system (10), client computer systems are synchronized with a server database by dividing data to be distributed from a server database into groups (80ad) and assigning one or more of the groups to each client computer system. When a client computer system accesses the server, the client computer system sends changes made to its local database to the server. The server updates its database with these changes. After making the updates to its database, the server determines which groups share in the changes made, and creates modification files (86ad) for these groups. The clients download the modification files for the groups to which they are assigned.